

**Advances in Anatomy, Embryology and Cell Biology**

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## Implantation

The Role of Proteinases, and Blockage of Implantation by  
Proteinase Inhibitors

35 figures, 123 pages. 1977.

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**Contents:** Materials and Methods: Laboratory Animals and Experimental Outline. Morphological Investigations. Histochemical Investigations-Biochemical Investigations. Chemicals. - Results: Morphology of Normal Implantation. Histochemistry and Biochemistry of Normal Implantation. Investigations of the Physiological Role and Regulation of Blastocyst Proteinase in the Rabbit. - Discussion: Morphology of the Interaction Between Trophoblast and Endometrium in the Attachment Phase. Morphological Observations on the Formation of the Blastocyst Coverings and Their Dissolution at Implantation. Concepts about the Chemical Composition of the Blastocyst Coverings and Possible Pathways for Their Enzymatic Degradation. On the Physiological Role of Glycosidases and Proteases in the Dissolution of the Blastocyst Coverings and in Implantation. The Physiological Regulation of the Process of Implantation. On the Role of the Trophoblast and the Endometrium at Implantation. The Possible Use of Proteinase Inhibitors in the Inhibition of Implantation as a Method of Birth Control.

Implantation -- the establishment of cellular contact between embryo and mother -- has become an extremely relevant subject in clinical medicine with the increased public use of contraceptives designed to interfere with this process. This book summarizes recent progress in our understanding of the molecular biological mechanisms directly involved in implantation initiation, and the physiologic regulation of this process as a basis for pharmacologic control.



New research presented here examines the central role played by proteolytic enzymes of the trophoblast and the uterus. Never before published light and electron micrographs illustrate the inhibition of implantation by the use of specific proteinase inhibitors in vivo. The author discusses potential problems involved with the use of proteinase inhibitors in regulating fertility.

This study makes an important statement and deserves the considered attention of specialists and researchers concerned with the problems of reproduction and fertility regulation.

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